GREEN ISLANDS OF THE NEPTICULIDAE. — In the newly published *Moths and Butterflies of Great Britain and Ireland*, Vol. 1, Col. A. M. Emmet, in his introduction to the Nepticulidae, states that the green islands in fallen leaves containing mines have never satisfactorily been explained. During a past meeting of the B.E.N.H.S. there was a discussion on this topic, following an exhibit of larval mines, and I suggested a possible explanation which was acceptable to most members present, though the details have never been published. Further observations on changes during leaf fall tend to confirm my suggestion.

The needs of a living leaf cell are water, carbon-di-oxide (for photosynthesis) and salt, mainly nitrates (for protein synthesis). When in the autumn a leaf dies it does so because an abscissus layer of cork forms across the base of the petiole and this cuts off the supply of water and salts from the roots, so that all synthesis stops. The vascular tissues of the leaf become empty and starch can no longer be removed from the leaves. The cells die and their contents decay. Guard cells in the lower epidermis collapse, leaving the stomata open and water evaporates. As the leaves dry out shrinkage tends to close the stomata.

If the leaf is mined, however, the living larva produces CO_2 and water by its own respiration, while the decaying frass in the mine provides a source of nitrogenous material and additional heat. It is suggested that this source of the three basic materials is enough to keep a patch of cells around the mine actively metabolising, and that such a patch, with functional chlorophyll, will form an island sealed off by the dead cells surrounding it.

Col. Emmet mentions, in his account of the mines of *Ectodemia intimella* (Zeller), that the mines are often waterlogged. Where else, except from larval respiration, could this water be derived, since the leaf cuticle is impermeable to water, the stomata are closed and the normal supply cut off. When the larva vacates the mine the island soon vanishes. — E. H. WILD, 112, Foxearth Road, Selsdon, Croydon, Surrey, CR2 8EF.

MANIA MAURA LINNAEUS (OLD LADY): AN EXTENDED AESTIVATION OR AN UNUSUAL HIBERNATION? — On Sunday, 18th January, before shedding my gardening clothes, I decided to scrub the floor of my bug-room. I was well on with the job when a strange shadow passed in front of me; I looked up and was surprised to see a large moth flying clumsily around the room light, and I was able to distinguish it as *Mania maura* Linnaeus. After one or two widening rounds, it disappeared, and I took it that it had returned to its resting place. Being only a "macro", I did not bother further with it, and it only occurred to me later on that this species does not usually hibernate. — S. N. A. JACOBS, 54 Hayes Lane, Bromley, Kent, 23.i.1976. [This is most interesting and we should like to hear of any other cases of suspected hibernation in this species. — Editor.]